UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,357	02/28/2002	David A. Meckes	1174/146	6603

25297   7590   06/22/2004

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EXAMINER
KOHNER, MATTHEW J

ART UNIT	PAPER NUMBER
3653	

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 February 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-6,9-13,16-18,21-24,27-32,35-37,39-42 and 44-58_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _16-18, 37, 39, 40, 44,-47, 49, 51-58_ is/are allowed.

6)☒ Claim(s) _1-6,9-13,21-24,27-32,35,36,41,42,48 and 50_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _1/13/2003_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Response to Arguments / Amendments

Examiner acknowledges applicant's arguments with respect to the Schaal reference and withdraws the § 103 rejection in light of the arguments.

Examiner further acknowledges that claim 16 has been amended to overcome the objection made in the previous office action.

Claim Objections

Claim 29 objected to because of the following informalities:

There appears to be a typographical error in line 4. The phrase "a controller for indicating calculating ..." does not make sense as written.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 9, 11-13, 21, 23, 24, 27-29, 31, 32, 35, 36, 41, 42, 48 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,096,180 to Nagaoka et al.

Nagaoka discloses a method of monitoring resource units in a group, comprising:

(a) providing a group of resource units (40);

(b) determining a thickness of one or more of the resource units (Col. 8, lines

47+); and

(c) indicating when the group of resource units reaches a predetermined

size (Col. 11, lines 28+; wherein the predetermined size is the size of the stack

[i.e. the number of sheets] needed to perform the particular print job) after one

or more of the resource units has been moved from the group and responsive

to the determination of thickness in step (b).

In regard to claim 3, Nagaoka discloses detecting the size of the group of resource units

prior to any resource units being moved from the group (Col. 10, lines 44+; the

determination/detection step is performed every time the start button is pressed. Therefore, it is

done after a new stack of sheets is placed in the cassette [i.e. prior to any resource units being

moved/before the first print job is requested]. It is also done after paper has been moved from

the original stack of sheets [i.e. after the first print job is completed but before the second print

job is started]).

In regard to claim 4, Nagaoka discloses detecting the size of the group of resource units

including providing a sensor for determining when the size of the group of resource units is less

than a second predetermined size (Col. 11, lines 28+; wherein the predetermined size is the size

of the stack i.e. the number of sheets needed to perform the 2nd print job).

In regard to claim 5, Nagaoka discloses determining the thickness further includes

providing a device for measuring the thickness of the one or more resource units as the one or

more resource units are moved from the group (The tilt arm [66] is continuously moving

[lowering] as the sheets are moved out. Therefore, Nagaoka is continuously measuring the stack

as the sheets are moved out of the stack).

In regard to claim 9, Nagaoka discloses a method of monitoring resource units in a group

of resource units, comprising:

> (a) detecting size of a group of resource units (Col. 8, lines 47+); and

> (b) indicating, based upon the thicknesses of at least one of the resource units,
>
>> when the group of resource units reaches a predetermined size after one or
>>
>> more resource units has been moved from the group (Col. 11, lines 28+;
>>
>> wherein the predetermined size is the size of the stack [i.e. the number of
>>
>> sheets] needed to perform the particular print job).

In regard to claim 11, Nagaoka discloses detecting the size of the group of resource units

prior to any resource units being moved from the group (Col. 10, lines 44+; the

determination/detection step is performed every time the start button is pressed. Therefore, it is

done after a new stack of sheets is placed in the cassette [i.e. prior to any resource units being

moved/before the first print job is requested]. It is also done after paper has been moved from

the original stack of sheets [i.e. after the first print job is completed but before the second print

job is started]).

In regard to claim 12, Nagaoka discloses detecting the size of the group of resource units

including providing a sensor for determining when the size of the group of resource units is less

than a predetermined size (Col. 11, lines 28+; wherein the predetermined size is the size of the

stack i.e. the number of sheets needed to perform a particular print job).

In regard to claim 13, Nagaoka discloses determining the thickness further includes

providing a device for measuring the thickness of the one or more resource units as the one or

more resource units are moved from the group (The tilt arm [66] is continuously moving

[lowering] as the sheets are moved out. Therefore, Nagaoka is continuously measuring the stack

as the sheets are moved out of the stack).

In regard to claim 21, Nagaoka discloses a system for monitoring resource units in a

stack, the system comprising:

   (a) a container (37) for containing a group of resource units;

   (b) a device for measuring a thickness of one or more of the resource units (66); and

   (c) an indicator for indicating, responsive to the determination of thickness from said

      device, when the group of resource units reaches a predetermined size after one or

      more of the resource units has been moved from the group (Col. 11, lines 28+;

      wherein the predetermined size is the size of the stack [i.e. the number of sheets]

      needed to perform the particular print job).

In regard to claim 23, Nagaoka discloses detecting the size of the group of resource units

prior to any resource units being moved from the group (Col. 10, lines 44+; the

determination/detection step is performed every time the start button is pressed. Therefore, it is

done after a new stack of sheets is placed in the cassette [i.e. prior to any resource units being

moved/before the first print job is requested]. It is also done after paper has been moved from the original stack of sheets [i.e. after the first print job is completed but before the second print job is started]).

In regard to claim 24, Nagaoka discloses detecting the size of the group of resource units including providing a sensor for determining when the size of the group of resource units is less than a second predetermined size (Col. 11, lines 28+; wherein the predetermined size is the size of the stack i.e. the number of sheets needed to perform the 2nd print job).

In regard to claims 27-28, Nagaoka discloses a display for indicating to the operator when the sheets are less than a predetermined size (See e.g. Col. 11, lines 32+).

In regard to claim 29, Nagaoka discloses a system for monitoring resource units in a group of resource units, comprising:

> (a) detecting size of a group of resource units (Col. 8, lines 47+); and

> (b) indicating, based upon the thicknesses of at least one of the resource units, when the group of resource units reaches a predetermined size after one or more resource units has been moved from the group (Col. 11, lines 28+; wherein the predetermined size is the size of the stack [i.e. the number of sheets] needed to perform the particular print job).

In regard to claim 31, Nagaoka discloses detecting the size of the group of resource units prior to any resource units being moved from the group (Col. 10, lines 44+; the determination/detection step is performed every time the start button is pressed. Therefore, it is done after a new stack of sheets is placed in the cassette [i.e. prior to any resource units being

moved/before the first print job is requested]. It is also done after paper has been moved from

the original stack of sheets [i.e. after the first print job is completed but before the second print

job is started]).

In regard to claim 32, Nagaoka discloses detecting the size of the group of resource units

including providing a sensor for determining when the size of the group of resource units is less

than a second predetermined size (Col. 11, lines 28+; wherein the predetermined size is the size

of the stack i.e. the number of sheets needed to perform the 2nd print job).

In regard to claims 35-36, Nagaoka discloses a display for indicating to the operator

when the sheets are less than a predetermined size (See e.g. Col. 11, lines 32+).

In regard to claims 41-42, Nagaoka discloses a CPU (70) for performing the detection,

determination and indication features.

In regard to claim 48, Nagaoka discloses a method of monitoring resource units in a

group, comprising:

(a) providing a group of resource units (40);

(b) determining a thickness of one or more of the resource units (Col. 8, lines

47+);

(c) indicating when the group of resource units reaches a predetermined

size after one or more of the resource units has been moved from the

group and responsive to the determination of thickness in step (b) (Col. 11, lines 28+);

and

(d) disabling the moving of resource units when the group of resource units

is less than the predetermined size (Col. 11, lines 28+).

In regard to claim 50, Nagaoka discloses a method of monitoring resource units in a group of resource units, comprising:

(a) detecting the size of a group of resource units (Col. 8, lines 47+);

(b) indicating, based upon the thicknesses of at least one of the resource units, when the group of resource units reaches a predetermined size after one or more resource units has been moved from the group (Col. 11, lines 28+); and

(c) disabling the moving of resource units when the group of resource units is less than the predetermined size (Col. 11, lines 28+).

Claims 1, 3, 5, 9, 11, 12, 13 21, 23, 27, 28, 29, 31, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,915,690 to Surya.

Surya discloses a method of monitoring resource units in a group, comprising:

(a) providing a group of resource units (56);

(b) determining a thickness of one or more of the resource units (Col. 4, lines 38+); and

(c) indicating when the group of resource units reaches a predetermined size (Col. 4, lines 62+) after one or more of the resource units has been moved from the group and responsive to the determination of thickness in step (b).

In regard to claims 3 and 5, Surya discloses the arm (28) is continuously moving (lowering) as the sheets are moved out. In other words, Surya is continuously measuring the

stack as the sheets are moved out of the stack. Therefore, Surya is determining the thickness

both prior to any resource units being moved and also as the resource units are moved.

In regard to claim 9, Surya discloses a method of monitoring resource units in a group of

resource units, comprising:

> (a) detecting size of a group of resource units (Col. 4, lines 38+); and

> (b) indicating, based upon the thicknesses of at least one of the resource units,
>
>> when the group of resource units reaches a predetermined size after one or
>>
>> more resource units has been moved from the group (Col. 4, lines 62+).

In regard to claims 11 and 13, Surya discloses the arm (28) is continuously moving

(lowering) as the sheets are moved out. In other words, Surya is continuously measuring the

stack as the sheets are moved out of the stack. Therefore, Surya is determining the thickness

both prior to any resource units being moved and also as the resource units are moved.

In regard to claim 12, Surya discloses a sensor (Col. 5, lines 3+).

In regard to claim 21, Surya discloses a system for monitoring resource units in a stack,

the system comprising:

> (a) a container (34) for containing a group of resource units;

> (b) a device for measuring a thickness of one or more of the resource units (28); and

> (c) an indicator for indicating, responsive to the determination of thickness from said

device, when the group of resource units reaches a predetermined size after one or more of the resource units has been moved from the group (Col. 4, lines 62+).

In regard to claim 23, Surya discloses the arm (28) is continuously moving (lowering) as the sheets are moved out. In other words, Surya is continuously measuring the stack as the sheets are moved out of the stack. Therefore, Surya is determines the thickness prior to any resource units being moved out of the stack.

In regard to claims 27-28, Surya discloses a display for indicating to the operator when the sheets are less than a predetermined size (Col. 4, lines 62+).

In regard to claim 29, Surya discloses a system for monitoring resource units in a group of resource units, comprising:

    (a) detecting size of a group of resource units (Col. 4, lines 38+); and

    (b) indicating, based upon the thicknesses of at least one of the resource units, when the group of resource units reaches a predetermined size after one or more resource units has been moved from the group (Col. 4, lines 62+).

In regard to claim 31, Surya discloses the arm (28) is continuously moving (lowering) as the sheets are moved out. In other words, Surya is continuously measuring the stack as the sheets are moved out of the stack. Therefore, Surya is determines the thickness prior to any resource units being moved out of the stack.

In regard to claims 35-36, Surya discloses a display for indicating to the operator when the sheets are less than a predetermined size (Col. 4, lines 62+).

Claims 1, 3-5, 9, 11-13, 21, 23, 24, 27-28, 29, 31, 32, 33-36, 48 and 50 are rejected under

35 U.S.C. 102(b) as being anticipated by US Patent No. 6,000,871 to Fisher, Sr.

Fisher discloses a method of monitoring resource units in a group, comprising:

    (a) providing a group of resource units (30);

    (b) determining a thickness of one or more of the resource units (Col. 6, lines

        43+); and

    (c) indicating when the group of resource units reaches a predetermined size (Col.

        7, lines 22+) after one or more of the resource units has been moved from the

        group and responsive to the determination of thickness in step (b).

In regard to claims 3 and 5, Fisher discloses the indicator is continuously moving

(lowering) as the sheets are moved out (Col. 2, lines 53+). In other words, Fisher is continuously

measuring the stack as the sheets are moved out of the stack. Therefore, Fisher is determining

the thickness both prior to any resource units being moved and also as the resource units are

moved.

In regard to claim 4, Fisher discloses a sensor which detects when the sheets are less than

a second predetermined size (Col. 7, lines 24+). Further, Fisher disclose than there may be

additional indications which will reflect additional different predetermined amounts of paper in

the stack (Col. 7, lines 5+).

In regard to claim 9, Fisher discloses a method of monitoring resource units in a group of

resource units, comprising:

(a) detecting size of a group of resource units (Col. 6, lines 43+); and

(b) indicating, based upon the thicknesses of at least one of the resource units,

when the group of resource units reaches a predetermined size after one or

more resource units has been moved from the group (Col. 7, lines 22+).

In regard to claims 11 and 13, Fisher discloses the indicator is continuously moving

(lowering) as the sheets are moved out (Col. 2, lines 53+). In other words, Fisher is continuously

measuring the stack as the sheets are moved out of the stack. Therefore, Fisher is determining

the thickness both prior to any resource units being moved and also as the resource units are

moved.

In regard to claim 12, Fisher discloses a sensor which detects when the sheets are less

than a predetermined size (Col. 7, lines 22+). Further, Fisher disclose than there may be

additional indications which will reflect additional different predetermined amounts of paper in

the stack (Col. 7, lines 5+).

In regard to claim 21, Fisher discloses a system for monitoring resource units in a stack,

the system comprising:

(a) a container (220) for containing a group of resource units;

(b) a device for measuring a thickness of one or more of the resource units (330); and

(c) an indicator for indicating, responsive to the determination of thickness from said

device, when the group of resource units reaches a predetermined size after one or

more of the resource units has been moved from the group (Col. 7, lines 22+).

In regard to claim 23, Fisher discloses the indicator is continuously moving (lowering) as the sheets are moved out (Col. 2, lines 53+). In other words, Fisher is continuously measuring the stack as the sheets are moved out of the stack. Therefore, Fisher is determining the thickness prior to any resource units being moved out.

In regard to claim 24, Fisher discloses a sensor which detects when the sheets are less than a second predetermined size (Col. 7, lines 24+). Further, Fisher disclose than there may be additional indications which will reflect additional different predetermined amounts of paper in the stack (Col. 7, lines 5+).

In regard to claims 27-28, Fisher discloses a display for indicating to the operator when the sheets are less than a predetermined size (Col. 7, lines 22+).

In regard to claim 29, Fisher discloses a system for monitoring resource units in a group of resource units, comprising:

> (a) detecting size of a group of resource units (Col. 6, lines 43+); and

> (b) indicating, based upon the thicknesses of at least one of the resource units,
>
>> when the group of resource units reaches a predetermined size after one or
>>
>> more resource units has been moved from the group (Col. 7, lines 22+).

In regard to claim 31, Fisher discloses the indicator is continuously moving (lowering) as the sheets are moved out (Col. 2, lines 53+). In other words, Fisher is continuously measuring the stack as the sheets are moved out of the stack. Therefore, Fisher is determining the thickness prior to any resource units being moved out.

In regard to claim 32, Fisher discloses a sensor which detects when the sheets are less than a second predetermined size (Col. 7, lines 24+). Further, Fisher disclose than there may be additional indications which will reflect additional different predetermined amounts of paper in the stack (Col. 7, lines 5+).

In regard to claims 35-36, Fisher discloses a display for indicating to the operator when the sheets are less than a predetermined size (Col. 7, lines 22+).

In regard to claim 48, Fisher discloses a method of monitoring resource units in a group, comprising:

(a) providing a group of resource units (30);

(b) determining a thickness of one or more of the resource units (Col. 6, lines

43+);

(c) indicating when the group of resource units reaches a predetermined

size after one or more of the resource units has been moved from the

group and responsive to the determination of thickness in step (b) (Col. 7, lines 22+);

and

(d) disabling the moving of resource units when the group of resource units

is less than the predetermined size (Col. 7, lines 37+).

In regard to claim 50, Fisher discloses a method of monitoring resource units in a group of resource units, comprising:

(a) detecting the size of a group of resource units (Col. 6, lines 43+);

(b) indicating, based upon the thicknesses of at least one of the resource

units, when the group of resource units reaches a predetermined size after one or

more resource units has been moved from the group (Col. 7, lines 22+); and

(c) disabling the moving of resource units when the group of resource units is less than

the predetermined size (Col. 7, lines 37+).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

Claims 2, 10, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Nagaoka.

Claims 2, 10, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Surya.

Claims 2, 10, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fisher.

In regard to the above claims, the group of resource units is a stack of sheet articles.

However, it is in a printer rather than mail insertion system. However, the same concept would

be useful in determining if the stack is too low to perform the mail insertion job. It would be

obvious to one of ordinary skill in the art to use such a method in a mail insertion environment.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Surya.

Surya does not specifically disclose that the papers are bottom fed, however, this given the teaching of the disclosure this would be obvious to one of ordinary skill in the art.

Allowable Subject Matter

Claims 16, 17, 18, 37, 39, 40, 44, 45, 46, 47, 49, 51, 52, 53, 54, 55, 56, 57 and 58 are allowed.

Claim 37, requires a system for controlling removal of sheet articles from a stack, comprising:

(a) a detector for detecting a level of a stack of sheet articles;

(b) a mechanical device for removing one or more sheet articles from the stack;

(c) a device for determining a thickness of at least one of the sheet articles removed from the stack; and

(d) an indicator for indicating, responsive to the determination of thickness by the device, when the stack of sheet articles reaches a predetermined level and selectively stopping removal of sheet articles from the stack.

US Patent No. 5,704,246 to Kruger discloses a gripper arm for measuring the thickness of sheets as they are removed from a supply source. Kruger discloses that this measurement information is used in controlling the operation of the system (Col. 2, lines 30+). However, Kruger does not disclose a detector for determining a level of the stack of sheets nor an indicator for indicating when the stack of sheet articles reaches a predetermined level and selectively stopping removal of sheet articles from the stack.

Similarly, since claims 16, 44, 46, 51 and 52 require the thickness determination of the at least one resource unit removed from the group, it defines over the prior art of record. The prior

art of record measures the thickness <u>prior to removal from the stack.</u> The prior art does not

measure the thickness after removal from the stack (See e.g. Nagaoka, Surya and Fisher).

Kruger measures thickness after removal from the stack, but Kruger does not meet the other

limitations of the respective allowed claims.

Since, claims 53-57 require, inter alia, measuring the thickness of one or more resource

units and a counter for determining the number of resource units <u>removed</u> from the container it

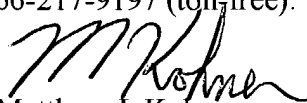defines over the prior art of record.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Matthew J. Kohner whose telephone number is 703-305-8496.

The examiner can normally be reached on Mon-Fri 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Donald Walsh can be reached on 703-306-4173. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew J. Kohner
Examiner
Art Unit 3653

mjk

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